December 14, 1976

Dr. Ed Fritsch
McArdle Laboratory for
Cancer Research
University of Wisconsin
Madison, Wisconsin 53706

Dear Ed:

I am sending you copies of Ram's paper, as you requested. I have almost finished a manuscript describing our experiments with stationary phase cells and with randomly growing cells infected in the presence of BUdR. The points of the the paper are: (1) synthesis of viral DNA, particularly pf plus strand DNA, is inhibited in stationary cells; (2) the length of minus strands in stationary cells is less than full length (the length of plus strands is also reduced); (3) replication of cellular DNA is required for integration of viral DNA in either cells released from Go or in randomly growing cells. Our data are consistent with the idea that completion of the viral DNA molecule requires factor(s) present in cellular S phase and that integration requires replication of cellular DNA simply because viral DNA must first be completed. However, we cannot as yet show that the factor(s) depleted in stationary cells are normally present only in S (as opposed to being present throughout the cell cycle of unstarved cells). Moreover, it is possible that integration required some structural alteration in cellular DNA, since the presence of soluble factors which permit completion of viral DNA should result in integration of viral DNA into unreplicated cell DNA in cells which have not yet fully traversed S phase. All this is more fully discussed in the manuscript.

I would, of course, like to acknowledge your findings in the discussion and wonder if you would be willing to send me a synopsis of your findings thus far. I can then send you a copy of my finished version, so that you can approve my use of your "personal communication". I am currently planning to submit our manuscript to Cell. If you and Howard the circumstances to be appropriate, I would certainly be willing to consider the possibility of simultaneous publication in the same journal. If you have any interest in this, please let me know as soon as possible.

Best regards,

Harold E. Varmus, M.D.
Associate Professor
Department of Microbiology

HEV/es